

What is claimed is:

1. An isolated polynucleotide, or the complement thereof, encoding a polypeptide selected from the group consisting of :

a) SEQ ID NOs:2, 4, 5, 6, or 7, and

b) a naturally-occurring amino acid sequence having at least 90% sequence identity over the complete sequence of SEQ ID NOs:1, 2, 4, or 7, and which retains protein kinase activity.

2. A recombinant polynucleotide comprising a promoter sequence operably linked to a polynucleotide of claim 1.

3. A host cell transformed with the recombinant polynucleotide of claim 2.

4. A method for producing a polypeptide, the method comprising the steps of:

a) culturing the host cell of claim 3 under conditions suitable for the expression of the polypeptide; and

b) recovering the polypeptide from the host cell culture.

5. A composition comprising the polynucleotide sequence of claim 1 and a pharmaceutically acceptable excipient.

6. An isolated polynucleotide sequence selected from SEQ ID NO:9, SEQ ID NO:10, SEQ ID NO:11, SEQ ID NO:12, SEQ ID NO:13, and SEQ ID NO:14, or the complement thereof.

7. A composition comprising the polynucleotide sequence of claim 6 and a pharmaceutically acceptable excipient.

8. A method for detecting a polynucleotide in a sample comprising the steps of:

a) hybridizing the polynucleotide of claim 6 to nucleic acids of the sample,

thereby forming hybridization complexes; and

b) comparing hybridization complex formation with a standard, wherein the comparison indicates expression of the polynucleotide in the sample.

5 9. The method of claim 8 further comprising amplifying the nucleic acids of the sample prior to hybridization.

10. The method of claim 8 wherein the polynucleotide is attached to a substrate.

10 11. A method of using a polynucleotide to screen a plurality of molecules or compounds for a molecule or compound which specifically binds the polynucleotide, the method comprising:

a) combining the polynucleotide of claim 6 with a plurality of molecules or compounds under conditions to allow specific binding; and

15 b) detecting specific binding, thereby identifying a molecule or compound which specifically binds the polynucleotide.

20 12. The method of claim 11 wherein the molecules or compounds are selected from DNA molecules, RNA molecules, peptide nucleic acids, artificial chromosome constructions, peptides, transcription factors, and regulatory molecules.

13. An isolated polypeptide comprising an amino acid sequence selected from the group consisting of:

a) SEQ ID NOs:1, 2, 4, 5, 6, or 7, and

25 b) a naturally-occurring amino acid sequence having at least 90% sequence identity over the complete sequence of SEQ ID NOs:1,2, 4, or 7, and which retains protein kinase activity.

30 14. A purified antibody which specifically binds to the polypeptide of claim 13.

15. The antibody of claim 14, wherein the antibody is:
- (a) a chimeric antibody;
 - (b) a single chain antibody;
 - (c) a Fab fragment;
 - 5 (d) a F(ab')₂ fragment;
 - (e) a Fv fragment; or
 - (f) a humanized antibody.
16. A composition comprising an antibody of claim 14 and a pharmaceutically
10 acceptable excipient.
17. A method of diagnosing a condition or disease associated with the expression of
DAPK in a subject, comprising administering to said subject an effective amount of the
composition of claim 16.
18. A composition of claim 16, wherein the antibody is labeled.
19. A method of diagnosing a condition or disease associated with the expression of
DAPK in a subject, comprising administering to said subject an effective amount of the
20 composition of claim 18.
20. A method for detecting a DAPK polypeptide in a sample comprising the steps
of:
- a) combining the antibody of claim 14 with a sample under conditions to allow
25 specific binding; and
 - b) detecting specific binding, wherein specific binding indicates the presence of
the DAPK polypeptide in the sample.
21. A method of using an antibody to purify a DAPK polypeptide from a sample, the
30 method comprising:
- a) combining the antibody of claim 14 with a sample under conditions to allow

specific binding; and

b) separating the antibody from the protein, thereby obtaining purified DAPK polypeptide.